

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

Listing of Claims:

1. (currently amended): A method of sputtering a tungsten film from a tungsten target onto a semiconductor wafer including using krypton or xenon as a sputter gas, wherein the wafer is supported by a negatively biased platen during the sputtering, and the resistivity of the tungsten film is less than $11\mu\text{ohm cm}$.
2. (previously presented): A method as claimed in claim 1 wherein the deposition takes place in a vacuum chamber with a krypton pressure of less than 10mTorr.
3. (previously presented): A method as claimed in claim 2 wherein krypton pressure is less than 6mTorr.
4. (cancelled)
5. (currently amended): A method of sputtering a tungsten film from a tungsten target onto a semiconductor wafer including using krypton or xenon as a sputter gas, wherein the wafer is supported by a negatively biased platen during the sputtering, wherein the resistivity of the tungsten film is less than $11\mu\text{ohm cm}$, and wherein the power supplied to the target is greater than about 3.5 watts per cm^2 .

6. (currently amended): A method of sputtering a tungsten film from a tungsten target onto a semiconductor wafer including using krypton or xenon as a sputter gas, wherein the wafer is supported by a negatively biased platen during the sputtering, wherein the resistivity of the tungsten film is less than $11\mu\text{ohm cm}$, and wherein ~~the wafer is placed on a platen during deposition and~~ the platen temperature is between 200°C and 400°C during the sputtering.

7 – 8. (cancelled)

9. (previously presented): A method as claimed in claim 1 wherein the sputter gases further include argon.

10. (previously presented): A method as claimed in claim 9 wherein the ratio of argon to krypton or xenon is selected to minimize stress in the deposited film.

11 – 12. (cancelled)

13. (currently amended): A method of forming a tungsten/tungsten nitride stack on a wafer including sputtering a tungsten nitride film on a wafer and sputtering a tungsten film on the tungsten nitride film wherein the two sputtering processes are performed in a single chamber using a single target, wherein the tungsten film is sputtered from a tungsten target onto a semiconductor wafer including using krypton or xenon as a sputter gas in both of the two sputtering processes, and wherein the wafer is supported by a negatively biased platen during the two sputtering processes.

14. (currently amended): A method of forming a tungsten/tungsten nitride stack on a wafer including sputtering a tungsten nitride film on a wafer

and sputtering a tungsten film on the tungsten nitride film wherein the two sputtering processes are performed in a single chamber using a single target, wherein the tungsten nitride film is deposited by reactive sputtering and the sputter gases include nitrogen and krypton, and wherein the wafer is supported by a negatively biased platen during the sputtering.

15. (previously presented): A gate structure formed by the method of claim 13.

16. (previously presented): The method of claim 13, wherein the resistivity of the tungsten film is less than 11 μ ohm cm.

17. (previously presented): The method of claim 14, wherein the resistivity of the tungsten film is less than 11 μ ohm cm.